UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/757,349	01/08/2001	David Clear	40030/SAH/X2	8150

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ART UNIT	PAPER NUMBER
2661	10

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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/757,349	CLEAR ET AL.
	Examiner	Art Unit	
	Joshua Kading	2661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-30_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-30_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

PTOL-326 (Rev. 1-04)   Office Action Summary   Part of Paper No./Mail Date 10

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

5   The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-9 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply

10   with the enablement requirement. The claim(s) contains subject matter which was not

described in the specification in such a way as to enable one skilled in the art to which it

pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 1 is a single means claim. A single means claim is subject to an undue breadth

rejection because the claim covers every conceivable structure (means) for achieving

15   the stated property (result) while the specification discloses at most only those known to

the inventor. See MPEP 2164.08(a). The single means applicant discloses is a "packet

processing element".

The following is a quotation of the second paragraph of 35 U.S.C. 112:

20   The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-9 are rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

25   applicant regards as the invention.

It is not clear from the language of claim 1 whether or not applicant intends to disclose an apparatus for embodying "a plurality of schemata" or a method to select a "schema" from said "plurality of schemata".

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 24-28 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The language of claim 24 raises a question as to whether the claim is directed merely to an abstract idea that is not tied to a technological art, environment or machine which would result in a practical application producing a concrete, useful, and tangible result to form the basis for statutory subject matter. That is to say, there is no connection to the "real world" nor is there any physical embodiment of the invention in claim 24. For example, claim 24 would be statutory if the method steps were placed on a computer readable medium or if each step were performed by some physical means.

In addition, claim 24 suffers from a lack of post solution activity. Although claim 24 is looking up and retrieving data from a lookup table, there is no disclosure about what is done with that data that is retrieved. There is no post solution activity for the retrieved data in claim 24. See MPEP 2105.IV.A.2(b)(ii).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by
another filed in the United States before the invention by the applicant for patent or (2) a patent
granted on an application for patent by another filed in the United States before the invention by the
applicant for patent, except that an international application filed under the treaty defined in section
351(a) shall have the effects for purposes of this subsection of an application filed in the United States
only if the international application designated the United States and was published under Article 21(2)
of such treaty in the English language.

Claims 10-14, 16, 17, 19-21, 23-26, and 28-30 are rejected under 35

U.S.C. 102(e) as being anticipated by Egbert et al. (U.S. Patent 6,697,380 B1).

Regarding claim 10, Egbert discloses "a method of producing application data for

a packet using a packet processing element having a plurality of schemata programmed

thereon, the method comprising the steps of:

selecting at least one schema using classification information for the packet

(figure 3 as per col. 5, lines 1-15 where the entire entry in the table is the functional

equivalent of a schema (see applicant's figure 5 where each element (210, etc) defines

a schema structure)); and

producing the application data for the packet using the selected schema (figure

3, element 66 as per col. 5, lines 7-15)."

Regarding claim 11, Egbert discloses "the method of producing application data

according to claim 10 wherein at least one schema includes one or more key portions

and one or more application data portions (col. 5, lines 1-15), wherein the step of

producing the application data comprises the step of applying the classification

information for the packet to at least one key portion of schema to produce application

data for the packet from at least one application data portion of the schema (col. 1, lines

57-65).

5

Regarding claim 12, Egbert discloses "the method of producing application data

according to claim 11 wherein the key portions include at least one data selected from

group consisting of source data and destination data (col. 5, lines 4-7)."

10   Regarding claim 13, Egbert discloses "the method of producing application data

according to claim 11 wherein the application data portions include at least one data

selected from group consisting of accounting data, policing data and routing data (col. 5,

lines 7-8 where switching information is considered routing data because both route the

data to the intended destination)."

15

Regarding claim 14, Egbert discloses "the method of producing application data

according to claim 11 wherein the classification information includes one or more

classification data portions, and wherein the step of applying the classification

information comprises the step of comparing the classification data portions against the

20   key portions to select at least one schema for the packet (claim 2, col. 6, lines 55-61

where the keys in claim 2 are equivalent to the classification information in that they

both are used to access the lookup table in order to retrieve the stored data, it should

also be noted that it is inherent that the classification information is a piece of data, all

digital signals are data)."

Regarding claim 16, Egbert discloses "the method of producing application data

5   according to claim 10 wherein the plurality of schemata include a MAC bridging schema

(figure 3, element 58 and col. 5, lines 1-6)."

Regarding claim 17, Egbert discloses "the method of producing application data

according to claim 10 wherein the plurality of schemata include an IP routing schema

10   (figure 3, element 60 and col. 5, lines 1-6)."

Regarding claim 19, Egbert discloses "a packet switching controller comprising a

processing engine, the processing engine comprising:

an element for building a key using classification information for a packet; and

15   a lookup table containing one or more schemata (col. 1, lines 57-65 where a physical

object must be used to "generate a key");

wherein the key is used to select one of the schemata for the packet, and the

selected schema provides application data for the packet (col. 1, lines 57-65 and figure

3 as per col. 5, lines 1-15 where the entire entry in the table is the functional equivalent

20   of a schema (see applicant's figure 5 where each element (210, etc) defines a schema

structure))."

Regarding claim 20, Egbert discloses "the packet switching controller of claim 19 wherein at least one schema includes a key portion and an application data portion, and the key is compared against the key portion to lookup the application data portion (claim 2, col. 6, lines 55-61)."

5

Regarding claim 21, Egbert discloses "the packet switching controller of claim 19 wherein the key portion includes at least one data selected from group consisting of source data and destination data, and the application data portion includes at least one data selected from group consisting of accounting data, policing data and routing data

10   (col. 5, lines 7-8 where switching information is considered routing data because both route the data to the intended destination)."

Regarding claim 23, Egbert discloses "the packet switching controller of claim 19 wherein the schemata include at least one schema selected from group consisting of a

15   macro access control (MAC) bridging schema (figure 3, element 58 and col. 5, lines 1-6)..."

It should be noted that although claims 24-28 are also rejected under 35 U.S.C. 101, they are still rejected as below as they are understood at this time.

20

Regarding claim 24, Egbert discloses "a method of producing application data for a packet, the method comprising the steps of:

building a key using classification information for the packet (col. 1, lines 57-65);

selecting a schema for the packet from a lookup table containing one or more

schemata (figure 3 as per col. 5, lines 1-15 where the entire entry in the table is the

functional equivalent of a schema (see applicant's figure 5 where each element (210,

5   etc) defines a schema structure)); and

reading the application data from the selected schema (col. 5, lines 7-15)."

Regarding claim 25, Egbert discloses "the method of producing application data

of claim 24 wherein at least one schema includes a key portion and an application data

10   portion, and the key is compared against the key portion to lookup the application data

portion (claim 2, col. 6, lines 55-61)."

Regarding claim 26, Egbert discloses "the method of producing application data

of claim 25 wherein the key portion includes at least one data selected from group

15   consisting of source data and destination data, and the application data portion includes

at least one data selected from group consisting of accounting data, policing data and

routing data (col. 5, lines 7-8 where switching information is considered routing data

because both route the data to the intended destination)."

20   Regarding claim 28, Egbert discloses "the method of producing application data

of claim 24 wherein the schemata include at least one schema selected from group

consisting of a macro access control (MAC) bridging schema (figure 3, element 58 and

col. 5, lines 1-6)..."

Regarding claim 29, Egbert discloses "a data communication switch having a

5   backplane and a plurality of packet switching controllers interconnected over the

backplane (figure 2, elements 12 and 22 are the switches and controllers respectively

and the backplane is the Ethernet network described for figure 2 in col. 3, lines 59-60),

at least one packet switching controller comprising:

an application engine having a plurality of schemata programmed thereon,

10   wherein classification information for the packet is used to select at least one schema,

and wherein the selected schema is used to produce application data for the packet

(figure 2, element 27 as described in col. 4, lines 61-col. 5, lines 1-15 where the entire

entry in the table is the functional equivalent of a schema (see applicant's figure 5

where each element (210, etc) defines a schema structure) and element 66 is the

15   application data)."

Regarding claim 30, Egbert discloses "the data communication switch of claim 29

wherein at least one schema includes one or more key portions and one or more

application data portions (col. 5, lines 1-15), and the classification information for the

20   packet is applied to at least one key portion of a schema to produce application data for

the packet from at least one application data portion of the schema (col. 1, lines 57-65)."

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

5

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10   Claims 15, 22, and 27 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Egbert et al. in view of Long et al. (U.S. Patent 6,145,064).

Regarding claim 15, Egbert discloses the method of claim 10. However, Egbert

lacks what Long discloses, "at least one schema includes one or more key portions, one

15   or more key control portions and one or more application data portions, wherein the

step of producing the application data comprises the step of applying the classification

information for the packet to at least one key portion of a schema in conjunction with at

least one key control portion of the schema to produce application data for the packet

from at least one application data portion of the schema (col. 4, lines 10-46 where the

20   valid pit is a key control portion because it is used to halt the lookup process if the data

in the entry is not valid and to allow the process to continue if the entry is valid)." It

would have been obvious to one with ordinary skill in the art at the time of invention to

include the key control portion with the method of claim 10 for the purpose of halting the

lookup process if the entry in the table is not valid. The motivation for this is that by

25   halting the lookup process for invalid data, resources can be freed by not wasting them

on continuing the lookup process on data that is not valid.

Regarding claims 22 and 27 Egbert discloses the processing engine of claim 20

and the method of claim 24. However, Egbert lacks what Long discloses, "at least one

schema includes a key control portion, and the key control portion is used in conjunction

5   with the key to lookup the application data portion (col. 4, lines 10-46 where the valid pit

is a key control portion because it is used to halt the lookup process if the data in the

entry is not valid and to allow the process to continue if the entry is valid)." It would have

been obvious to one with ordinary skill in the art at the time of invention to include the

key control portion with the engine of claim 20 and the method of claim 24 for the

10   purpose of halting the lookup process if the entry in the table is not valid. The motivation

for this is that by halting the lookup process for invalid data, resources can be freed by

not wasting them on continuing the lookup process on data that is not valid.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Egbert

15   et al. in view of Chang et al. (U.S. Patent 6,525,850 B1).

Regarding claim 18, Egbert discloses the method of claim 10. However, Egbert

lacks what Chang discloses, "the plurality of schemata include an MPLS schema (figure

4, element 410 where the label switch controller with look-up table suggests that and

MPLS schema may be found in the table and used for routing)." It would have been

20   obvious to one with ordinary skill in the art at the time of invention to include the MPLS

schema with the method of claim 10 for the purpose of having the MPLS route packets

without the need to examine the entire packet (Chang, col. 14, lines 28-30). The

motivation for this is that by not examining an entire packet, the packet is thus routed

quicker than if the entire packet were to be examined.

Any inquiry concerning this communication or earlier communications from the

5   examiner should be directed to Joshua Kading whose telephone number is (703) 305-

0342. The examiner can normally be reached on M-F: 8:30AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Douglas Olms can be reached on (703) 305-4703. The fax phone number

for the organization where this application or proceeding is assigned is 703-872-9306.

10   Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

15   you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Joshua Kading
Examiner
Art Unit 2661

June 8, 2004

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KENNETH VANDERPUYE
PRIMARY EXAMINER